

ABSTRACT

Topic: Pedestrian reaction module in the automobile autopilot system.

Thesis: 83 p., 41 fig., 6 tab., 2 ext., 21 references.

DEEP LEARNING, PEDESTRIANS DETECTOR, IMAGE CLASSIFICATION, MACHINE LEARNING, CONVOLUTIONAL NETWORK, PEDESTRIAN, AUTOPILOT.

Object of research - methods of computer vision.

Subject of research is the model of detecting objects in the image, namely, the classical and on the basis of neural networks.

The purpose of the work is the development of architecture and description of the principles of operation of the pedestrian response system, namely the pedestrian detector.

Relevance - Reducing mortality and damage to pedestrians on the roads.

Results of work:

- Comparative analysis of existing methods of detection and classification;
- The proposed modification of one of the methods based on convolutional neural networks;
- The pedestrian deck system is implemented based on the proposed modification.

Novelty of work:

- The proposed modification of the existing algorithm improves the quality of detection;

Comparison of the classic method of pedestrian detection with methods based on neural networks.